

indicated that the above-referenced Office Action and the preliminary amendment had crossed in the mail. In light of that conversation, Applicants understand that the amendments will be entered and considered after a request is made for withdrawal of the finality of the Office Action. Applicants thank the Examiner for his assistance in this matter.

In response to the Final Office Action mailed November 9, 2001, please amend the above-referenced application as follows.

IN THE CLAIMS:

Please cancel claims 4, and 28-32 without prejudice to subsequent revival.

Please amend claims 1, 9, 23, 26, 27, and 33-35 as follows.

1. (once amended) An isolated nucleic acid that encodes a fusion polypeptide, wherein the fusion polypeptide comprises:

a) a catalytic domain of a glycosyltransferase that catalyzes the transfer of a saccharide, from a saccharide donor comprising a nucleotide sugar, to an acceptor molecule; and

b) a catalytic domain of an accessory enzyme that catalyzes the formation of the nucleotide sugar.

9. (once amended) The nucleic acid of claim 1, wherein the accessory enzyme is selected from the group consisting of:

a GDP-mannose dehydratase;

a GDP-mannose 3,5-epimerase;

a GDP-mannose 4-reductase;

a UDP-glucose 4' epimerase;

a UDP-GalNAc 4' epimerase;

a CMP-sialic acid synthetase;

a neuraminic acid aldolase;

an *N*-acetylglucosamine 2' epimerase;
a phosphate kinase selected from the group consisting of a pyruvate kinase, a myokinase, a creatine phosphate kinase, an acetyl phosphate kinase, and a polyphosphate kinase; and
a pyrophosphorylase selected from the group consisting of a UDP-Glc pyrophosphorylase, a UDP-Gal pyrophosphorylase, a UDP-GalNAc pyrophosphorylase, a GDP-mannose pyrophosphorylase, a GDP-fucose pyrophosphorylase, and a UDP-GlcNAc pyrophosphorylase.

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23. (once amended) The nucleic acid of claim 1, wherein the catalytic domain of the glycosyltransferase and the catalytic domain of the accessory enzyme are joined by a peptide linker.

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26. (once amended) An expression vector which comprises the nucleic acid of claim 1.

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27. (once amended) A host cell which comprises the expression vector of claim 26.

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33. (once amended) A method of producing a fusion polypeptide, the method comprising:

a) introducing into a host cell the expression vector of claim 26, under conditions where the host cell is transformed with the expression vector; and
b) culturing the transformed host cell under conditions where the fusion polypeptide is expressed in the transformed host cell.

34. (once amended) The method of claim 33 further comprising a step of purifying the expressed fusion polypeptide.